

WHAT IS CLAIMED IS:

Sub A<sup>1</sup> } 1. A method for reporting calls having associated call transaction data, the calls being from a call originator to a call recipient the method comprising the steps of:

accessing the call transaction data;  
determining an approximate longitude and latitude of the call originator for each call using the call transaction data;  
and  
storing the approximate longitude and latitude.

2. The method of claim 1 and further comprising:  
generating a statistical report related to the call transaction data and including the approximate longitude and latitude of the call originator for each call.

Sub A<sup>2</sup> } 3. The method of claim 2 wherein the call transaction data for a given call includes a postal code of the call originator for the given call and wherein determining an approximate longitude and latitude comprises using the postal code to obtain the approximate longitude and latitude of the call originator.

4. The method of claim 3 wherein the determining step comprises correlating the postal code with the longitude and latitude of a geographic centroid of an area defined by the postal code.

5. The method of claim 1 wherein the call transaction data includes an area code of a telephone

line number of the call originator and wherein the determining step comprises using the area code of the telephone line number of the call originator to obtain the approximate longitude and latitude.

6. The method of claim 5 wherein the determining step comprises correlating the area code with the longitude and latitude of a geographic centroid of an area defined by the area code.

7. The method of claim 1 wherein the call transaction data comprises an area code and exchange code of a telephone line number of the call originator and wherein the determining step comprises using the area code and exchange code of the telephone line number of the call originator to obtain the appropriate longitude and latitude.

8. The method of claim 5 wherein the determining step comprises correlating the area code and exchange code with the longitude and latitude of a geographic centroid of an area defined by the area code and exchange code.

9. The method of claim 1 further comprising providing a map including the approximate longitude and latitude of the second party to a call.

10. The method of claim 1 wherein the call transaction data includes a postal code of the call originator, the method further comprising obtaining a nine-digit database including a plurality of approximate longitudes and latitudes, each corresponding to a particular nine-digit postal code, and obtaining a five-

digit database including a plurality of approximate longitudes and latitudes, each corresponding to a particular five-digit postal code, and the determining step further comprising:

if the postal code is contained in the nine-digit database, assigning the corresponding longitude and latitude from the nine digit database to the call; and

if the postal code is not contained in the nine-digit database, but a first five digits of the postal code are contained in the five-digit database, assigning the corresponding longitude and latitude from the five digit database to the call.

11. The method of claim 10 further comprising obtaining a three-digit database including a plurality of approximate longitudes and latitudes, each corresponding to a particular three-digit postal code, the determining step further comprising:

if the postal code is not contained in the nine-digit database or the five-digit database, but the first three digits of the postal code are contained in the three-digit database, assigning the corresponding longitude and latitude from the three digit database to the call.

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12. The method of claim 11 wherein the call transaction data includes a telephone line number of the call originator and further comprising obtaining an

exchange code database including a plurality of approximate longitudes and latitudes, each corresponding to a particular area code and exchange code, and the determining step further comprising:

if the postal code is not contained in the nine-digit database, the first five digits of the postal code are not contained in the five-digit database, and the first three digits of the postal code are not contained in the three-digit database, but the first six digits of the telephone line number are contained in the exchange code database, assigning the corresponding longitude and latitude from the exchange code database to the call.

13. The method of claim 12, further comprising obtaining an area code database including a plurality of approximate longitudes and latitudes, each corresponding to a particular area code, and the determining step further comprising:

if the postal code is not contained in the nine-digit database, the first five digits of the postal code are not contained in the five-digit database, the first three digits of the postal code are not contained in the three-digit database, and the first six digits of the telephone line number are not contained in the exchange code database, but the first three digits of the telephone line number are contained in the area code database, assigning the

corresponding longitude and latitude from the area code database to the call.

14. The method of claim 13, the determining step further comprising:

if the postal code is not contained in the nine-digit database, the first five digits of the postal code are not contained in the five-digit database, the first three digits of the postal code are not contained in the three-digit database, and the first six digits of the telephone line number are not contained in the exchange code database, and the first three digits of the line number are not contained in the area code database, assigning a special longitude and latitude, indicating unknown origin, to the call.

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15. The method of claim 1 wherein the call transaction data includes a postal code of the call originator and a telephone line number of the call originator, the postal code containing one of fewer than five digits, between five and nine digits, or more than nine digits, the method further comprising obtaining an exchange code database including a plurality of approximate longitudes and latitudes, each corresponding to a particular area code and exchange code, and obtaining an area code database including a plurality of approximate longitudes and latitudes, each corresponding to a particular area code, and the determining step further comprising:

if the first six digits of the telephone line number are contained in the exchange code database, assigning the corresponding longitude and latitude from the exchange code database to the call; and

if the first six digits of the line number are not contained in the exchange code database, but the first three digits of the line number are contained in the area code database, assigning the corresponding longitude and latitude from the area code database to the call.

16. The method of claim 15, the determining step further comprising:

if the first six digits of the telephone line number are not contained in the exchange code database, and the first three digits of the line number are not contained in the area code database, assigning a special longitude and latitude, indicating unknown origin, to the call.

17. The method as in any of claim 1, further comprising:

assigning a value to the assigned longitude and latitude, the value indicating a degree of accuracy of the assigned longitude and latitude.

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18. A method for reporting call records of calls having associated call transaction data, the method comprising the steps of:

accessing the call transaction data;  
verifying the validity of the call transaction data; and  
if the call transaction data is valid, generating a statistical report related to the call transaction data.

19. The method of claim 18 wherein the call transaction data is identifiable to one of a plurality of call originators and wherein the statistical reports are generated for a report requestor requesting a report for a predefined set of telephone line numbers and wherein the verifying step is performed with respect to the call transaction data for each particular report requestor.

20. The method of claim 19 wherein the verifying step is performed with respect to aggregated call transaction data.

21. The method of claim 17 wherein the verifying step comprises:  
performing statistical analysis to determine whether certain variables fall within established parameters.

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22. The method of claim 21 wherein the parameters are established using previously collected statistical call transaction data.

23. The method of claim 22 wherein the established parameters are adjusted over time as additional statistical call transaction data is collected.

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24. The method of claim 21 wherein the established parameters vary from one call report requestor to another.

25. The method of claim 21 wherein the variables comprise the number of calls placed or received in a particular time period.

26. A method of reporting local call records for calls having associated call transaction data, the method comprising the steps of:

accessing the call transaction data;  
processing the call transaction data; and  
generating a statistical report related to  
the call transaction data and according  
to one of a plurality of selectable  
report formats.

27. The method of claim 26 wherein the plurality of selectable report formats comprises a plurality of selectable table formats.

28. The method of claim 27 wherein the plurality of selectable table formats comprises tables providing information relating to at least one of most frequently called line numbers, most frequently called postal codes, most frequent callers, most frequently called-from postal codes, new callers, newly-called line numbers, call duration, unanswered calls and busy signals.



29. The method of claim 26 wherein the plurality of selectable report formats comprises a plurality of selectable graph formats.

30. The method of claim 29 wherein the plurality of selectable graph formats comprises graphs providing information relating to at least one of most frequently called line numbers, most frequently called postal codes, most frequent callers, most frequently called-from postal codes, new callers, newly-called line numbers, call duration, unanswered calls and busy signals.

31. The method of claim 26 wherein the plurality of selectable report formats comprises a plurality of selectable map formats.

32. The method of claim 31 wherein the plurality of selectable map formats comprises maps providing information relating to at least one of most frequently called line numbers, most frequently called postal codes, most frequent callers, most frequently called-from postal codes, new callers, newly-called line numbers, call duration, unanswered calls and busy signals.

33. The method of claim 31 wherein the plurality of selectable map formats comprises maps indicating an approximate geographic location of a call originator.

34. The method of claim 31 wherein the plurality of selectable map formats comprise maps having boundaries automatically generated based on the call transaction data.

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35. A method for reporting calls having associated call transaction data, the calls being from a call originator to a call recipient the method comprising the steps of:

accessing the call transaction data;  
determining an approximate geographical reference related to each call reflected in the call transaction data; and  
displaying a plurality of variable telecommunication transaction attributes associated with each call and correlated to the geographical reference for each call.

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